

Amendments to the Claims:

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1. (Currently amended) A solid oxide fuel cell stack comprising a plurality of adjoining fuel cells, wherein the fuel cells are mutually sealed in a gas-tight manner by a seal formed of: A seal for use in a high temperature fuel cell comprising:

ceramic fibres providing a matrix for retaining ceramic powder, and being capable of remaining flexible at operating temperatures of the fuel cell;

ceramic powder being disposed within the matrix, a substantial proportion of the ceramic powder having a particle size of about 5 µm in diameter;

the ceramic fibres and powder being capable of resisting sintering at operating temperatures of the fuel cell, ~~wherein the fibres and powder provide direct ceramic to ceramic contact,~~ and wherein the seal is substantially free of binder and has a fired porosity between about 35% to about 60%.
2. (Cancelled)
3. (Currently amended) The seal solid oxide fuel cell stack of claim 1 wherein the ceramic fibres and ceramic powder may be the same material or different and may comprise alumina or zirconia.
4. (Currently amended) The seal solid oxide fuel cell stack of claim 3 wherein the seal has a pre-fired porosity of less than about 45%.
5. (Currently amended) The seal solid oxide fuel cell stack of claim 4 wherein the seal has a pre-fired porosity of less than about 40%.

6. (Currently amended) The seal solid oxide fuel cell stack of claim 5 wherein the seal has a pre-fired porosity of about 35%.
7. (Currently amended) The seal solid oxide fuel cell stack of claim 1 or claims 3 to 6 which is formed by a tape casting process.
8. (Currently amended) The seal solid oxide fuel cell stack of claim 7 which has a fired porosity of less than about 50% and greater than about 35%.
9. (Currently amended) The seal solid oxide fuel cell stack of claim 8 which has a fired porosity of less than about 45% and greater than about 35%.
10. (Currently amended) The seal solid oxide fuel cell stack of claim 9 which has a fired porosity of less than about 40% and greater than about 35%.

Claim 11. (Cancelled)

12. (New) A composition for forming a gas seal against adjoining fuel cells in a solid oxide fuel cell stack comprising:

ceramic fibres providing a matrix for retaining ceramic powder, and being capable of remaining flexible at operating temperatures of the fuel cell, and in an amount between about 5% to about 40% by weight;

ceramic powder being disposed within the matrix, a substantial proportion of the ceramic powder having a particle size of about 5 µm in diameter; and in an amount between about 50% to about 90% by weight;

the ceramic fibres and powder being capable of resisting sintering at operating temperatures of the fuel cell, wherein the seal is substantially free of binder and has a fired porosity between about 35% to about 60%;

a plasticizer in an amount between about 1% to about 15% by weight;

an organic binder in an amount between about 2% to about 5% by weight; a dispersant in an amount greater than about 1% by weight; and a solvent.